

IN THE CLAIMS:

Please cancel all previous pending claims without prejudice or disclaimer of their subject matter and add the following new claims:

Sub 173
173. A non-threaded interbody spinal fusion implant for insertion across the height of a disc space between adjacent vertebral bodies of a human spine, the implant comprising a body having an insertion end, a trailing end being larger than said insertion end, a length between said ends, and an outer surface including bone engaging means for engaging said implant to adjacent vertebral bodies of the spine, said trailing end being adapted to engage instrumentation for the insertion of said implant, said body having at least two openings in communication with one another for permitting the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant, the outer locus of said bone engaging means forming a substantially frusto-conical configuration along at least a portion of said bone engaging means that is adapted to contact the adjacent vertebral bodies when implanted in the spine, said substantially frusto-conical configuration being along at least a portion of the length of said implant nearer said trailing end than said insertion end, said implant being made of a material appropriate for human implantation.

174. The spinal fusion implant of claim 173 in which said body has a substantially frusto-conical configuration along a sufficient portion of said implant that is adapted to contact the adjacent vertebral bodies when implanted in the spine so as to maintain an angulation of the adjacent vertebral bodies relative to one another.

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175. The spinal fusion implant of claim 173 in which said body has a substantially cylindrical configuration.

176. The spinal fusion implant of claim 173 in which said implant comprises a bone ingrowth material.

177. The spinal fusion implant of claim 173 in which said implant comprises a fusion promoting material.

178. The spinal fusion implant of claim 173 in which said implant is at least in part bioabsorbable.

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179. The spinal fusion implant of claim 173 in which said body has a plurality of openings for retaining fusion promoting material.

180. The spinal fusion implant of claim 173 in which said bone engaging means includes said outer surface being porous at least in part.

181. The spinal fusion implant of claim 173 in which said bone engaging means comprises a plurality of posts spaced apart along at least a portion of the outer surface of said body.

182. The spinal fusion implant of claim 181 in which said plurality of posts have a head portion and a stem portion, said head portion having a wider diameter than said stem portion.

183. The spinal fusion implant of claim 173 in which said bone engaging means comprises a mesh-like material having a plurality of interstices for receiving fusion promoting material.

184. The spinal fusion implant of claim 173 in which said bone engaging means includes a plurality of surface roughenings for engaging the adjacent vertebral

bodies and for maintaining said implant in place, said surface roughenings being present on at least a portion of said outer surface of said implant.

79 185. The spinal fusion implant of claim 184 in which said surface roughenings include a plurality of ratchetings.

186. The spinal fusion implant of claim 184 in which said surface roughenings include knurling.

187. The spinal fusion implant of claim 173 in which said body has an internal chamber and means for accessing said internal chamber.

188. The spinal fusion implant of claim 187 in which said internal chamber is capable of containing fusion promoting material.

189. The spinal fusion implant of claim 187 in which said body includes a wall surrounding said internal chamber.

190. The spinal fusion implant of claim 189 in which said wall has a plurality of openings passing therethrough in communication with said internal chamber.

Pub 23 191. The spinal fusion implant of claim 187 in which said body has means for closing said accessing means.

192. The spinal fusion implant of claim 173 in which said implant includes an engagement means for engaging instrumentation for the insertion of said implant.

193. The spinal fusion implant of claim 173 in which at least a portion of said outer surface comprises wells having at least partial walls.

194. The spinal fusion implant of claim 173 in which said implant is configured to be placed in close proximity in a side by side alignment to a second spinal fusion

implant, said first and second implants when placed together having a combined overall width that is less than the sum of the individual maximum diameters of each of said first and second implants.

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195. The spinal fusion implant of claim 173 in which said body has a longitudinal central axis and at least one truncated side forming a planar surface parallel to said central axis.
196. The spinal fusion implant of claim 173, in combination with a fusion promoting material.
197. The spinal fusion implant of claim 196, wherein said fusion promoting material includes at least one of bone, bone morphogenic protein, hydroxyapatite, hydroxyapatite compounds, and osteogenic proteins.
198. A non-threaded interbody spinal fusion implant for insertion across the height of a disc space between two adjacent vertebral bodies of a human spine, said implant comprising a body having a substantially frusto-conical configuration along a sufficient portion of said body that is adapted to contact the adjacent vertebral bodies when implanted in the spine so as to maintain an angulation of the adjacent vertebral bodies relative to one another, said body having an insertion end, a trailing end, and an outer surface including bone engaging means for engaging said implant to the adjacent vertebral bodies, the locus of said bone engaging means forming a substantially cylindrical configuration, said implant being made of a material appropriate for human implantation.
199. The spinal fusion implant of claim 198 in which said trailing end is larger than said insertion end.

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200. The spinal fusion implant of claim 198 in which said insertion end is larger than said trailing end.
201. The spinal fusion implant of claim 198 in which said implant comprises a bone ingrowth material.
202. The spinal fusion implant of claim 198 in which said implant comprises a fusion promoting material.
203. The spinal fusion implant of claim 198 in which said implant is at least in part bioabsorbable.
204. The spinal fusion implant of claim 198 in which said body has a plurality of openings for retaining fusion promoting material.
205. The spinal fusion implant of claim 198 in which said bone engaging means includes said outer surface being porous at least in part.
206. The spinal fusion implant of claim 198 in which said bone engaging means comprises a plurality of posts spaced apart along at least a portion of the outer surface of said body.
207. The spinal fusion implant of claim 206 in which said plurality of posts have a head portion and a stem portion, said head portion having a wider diameter than said stem portion.
208. The spinal fusion implant of claim 198 in which said bone engaging means comprises a mesh-like material having a plurality of interstices for receiving fusion promoting material.
209. The spinal fusion implant of claim 198 in which said bone engaging means includes a plurality of surface roughenings for engaging said adjacent vertebral

bodies and for maintaining said implant in place, said surface roughenings being present on at least a portion of said outer surface of said implant.

79 210. The spinal fusion implant of claim 209 in which said surface roughenings include a plurality of ratchetings.

211. The spinal fusion implant of claim 209 in which said surface roughenings include knurling.

212. The spinal fusion implant of claim 198 in which said body has an internal chamber and means for accessing said internal chamber.

213. The spinal fusion implant of claim 212 in which said internal chamber is capable of containing fusion promoting material.

214. The spinal fusion implant of claim 212 in which said body includes a wall surrounding said internal chamber.

215. The spinal fusion implant of claim 212 in which said wall has a plurality of openings passing therethrough in communication with said internal chamber.

Sub 195 216. The spinal fusion implant of claim 212 in which said body has means for closing said accessing means.

217. The spinal fusion implant of claim 198 in which one of said ends includes an engagement means for engaging instrumentation for the insertion of said implant.

218. The spinal fusion implant of claim 198 in which at least a portion of said outer surface comprises wells having at least partial walls.

219. The spinal fusion implant of claim 198 in which said implant is configured to be placed in close proximity in a side by side alignment to a second spinal fusion implant, said first and second implants when placed together having a combined overall width that is less than the sum of the individual maximum diameters of each of said first and second implants.

220. The spinal fusion implant of claim 198 in which said body has a longitudinal central axis and at least one truncated side forming a planar surface parallel to said central axis.

221. The spinal fusion implant of claim 198, in combination with a fusion promoting material.

222. The spinal fusion implant of claim 221, wherein said fusion promoting material includes at least one of bone, bone morphogenic protein, hydroxyapatite, hydroxyapatite compounds, and osteogenic proteins.

223. A non-threaded interbody spinal fusion implant for insertion across the height of a disc space between the adjacent vertebral bodies, the implant comprising a body having a substantially frusto-conical configuration along a sufficient portion of said body that is adapted to contact the adjacent vertebral bodies when implanted in the spine so as to maintain an angulation of the adjacent vertebral bodies relative to one another, said body having at least two openings in communication with one another for permitting the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant, said body having, an insertion end, a trailing end being larger than said insertion end, and an outer surface including bone engaging means for engaging said implant to the

79 Pub 963 adjacent vertebral bodies, said trailing end being adapted to engage instrumentation for the insertion of said implant, the outer locus of said bone engaging means forming a substantially frusto-conical configuration, said bone engaging means being adapted to facilitate linear insertion of said implant into the disc space while resisting expulsion of said implant in a direction opposite to the direction of insertion, said implant being made of a material appropriate for human implantation.

224. The spinal fusion implant of claim 223 in which said implant comprises a bone ingrowth material.

225. The spinal fusion implant of claim 223 in which said implant comprises a fusion promoting material.

226. The spinal fusion implant of claim 223 in which said implant is at least in part bioabsorbable.

Pub 971 227. The spinal fusion implant of claim 223 in which said body includes a plurality of openings for retaining fusion promoting material.

228. The spinal fusion implant of claim 223 in which said bone engaging means includes said outer surface being porous at least in part.

229. The spinal fusion implant of claim 223 in which said bone engaging means comprises a plurality of posts spaced apart along at least a portion of the outer surface of said body.

230. The spinal fusion implant of claim 229 in which said plurality of posts have a head portion and a stem portion, said head portion having a wider diameter than said stem portion.

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231. The spinal fusion implant of claim 223 in which said bone engaging means comprises a mesh-like material having a plurality of interstices for receiving fusion promoting material.
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232. The spinal fusion implant of claim 223 in which said bone engaging means includes a plurality of surface roughenings for engaging said adjacent vertebral bodies and for maintaining said implant in place, said surface roughenings being present on at least a portion of said outer surface of said implant.
233. The spinal fusion implant of claim 232 in which said surface roughenings include a plurality of ratchetings.
234. The spinal fusion implant of claim 232 in which said surface roughenings include knurling.
235. The spinal fusion implant of claim 223 in which said implant has an internal chamber and means for accessing said internal chamber.
- Sub 79*
236. The spinal fusion implant of claim 235 in which said internal chamber is capable of containing fusion promoting material.
237. The spinal fusion implant of claim 235 in which said body includes a wall surrounding said internal chamber.
238. The spinal fusion implant of claim 237 in which said wall has a plurality of openings passing therethrough in communication with said internal chamber.
- Sub 79*
239. The spinal fusion implant of claim 235 in which said body has means for closing said accessing means.

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240. The spinal fusion implant of claim 223 in which one of said ends includes an engagement means for engaging instrumentation for the insertion of said implant.
241. The spinal fusion implant of claim 223 in which at least a portion of said outer surface comprises wells having at least partial walls.
242. The spinal fusion implant of claim 223 in which said implant is configured to be placed in close proximity in a side by side alignment to a second spinal fusion implant, said first and second implants when placed together having a combined overall width that is less than the sum of the individual maximum diameters of each of said first and second implants.
243. The spinal fusion implant of claim 223 in which said body has a longitudinal central axis and at least one truncated side forming a planar surface parallel to said central axis.
244. The spinal fusion implant of claim 223, in combination with a fusion promoting material.
245. The spinal fusion implant of claim 244, wherein said fusion promoting material includes at least one of bone, bone morphogenic protein, hydroxyapatite, hydroxyapatite compounds, and osteogenic proteins.
- Pub 111 246. A non-threaded interbody spinal fusion implant for insertion across the height of a disc space between adjacent vertebral bodies of a human spine, the implant comprising a body having a substantially cylindrical configuration, an insertion end, a trailing end, and an outer surface including a plurality of posts having a head and a stem, said head being wider than said stem, said posts being spaced

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apart along at least a portion of said outer surface of said body for engaging said implant to adjacent vertebral bodies of the spine, the locus of said plurality of posts forming a substantially cylindrical configuration, said body having at least two openings in communication with one another for permitting the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant, said implant being made of a material appropriate for human implantation.

247. The spinal fusion implant of claim 246 in which said implant comprises a bone ingrowth material.

248. The spinal fusion implant of claim 246 in which said implant comprises a fusion promoting material.

249. The spinal fusion implant of claim 246 in which said implant is at least in part bioabsorbable.

Sub 112
250. The spinal fusion implant of claim 246 in which said body includes a plurality of openings for retaining fusion promoting material.

251. The spinal fusion implant of claim 246 in which said outer surface is porous at least in part.

252. The spinal fusion implant of claim 246 further comprising a plurality of surface roughenings for engaging said adjacent vertebral bodies and for maintaining said implant in place, said surface roughenings being present on at least a portion of said outer surface of said body.

253. The spinal fusion implant of claim 252 in which said surface roughenings include a plurality of ratchetings. *5*

254. The spinal fusion implant of claim 252 in which said surface roughenings include knurling.

255. The spinal fusion implant of claim 246 in which said implant has an internal chamber and means for accessing said internal chamber.

256. The spinal fusion implant of claim 255 in which said internal chamber is capable of containing fusion promoting material.

257. The spinal fusion implant of claim 255 in which said body includes a wall surrounding said internal chamber.

258. The spinal fusion implant of claim 257 in which said wall has a plurality of openings passing therethrough in communication with said internal chamber.

259. The spinal fusion implant of claim 255 in which said body has means for closing said accessing means.

260. The spinal fusion implant of claim 246 in which one of said ends includes an engagement means for engaging instrumentation for the insertion of said implant.

261. The spinal fusion implant of claim 246 in which at least a portion of said outer surface comprises wells having at least partial walls.

262. The spinal fusion implant of claim 246 in which said implant is configured to be placed in close proximity in a side by side alignment to a second spinal fusion implant, said first and second implants when placed together having a combined overall width that is less than the sum of the individual maximum diameters of each of said first and second implants.

263. The spinal fusion implant of claim 246 is which said implant is made of a material that is stronger than bone.

264. The spinal fusion implant of claim 246, in combination with a fusion promoting material.

265. The spinal fusion implant of claim 264, wherein said fusion promoting material includes at least one of bone, bone morphogenic protein, hydroxyapatite, hydroxyapatite compounds, and osteogenic proteins.

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266. A non-threaded interbody spinal fusion implant for insertion across the height of a disc space between two adjacent vertebral bodies of a human spine, the implant comprising a body having a substantially frusto-conical configuration along a sufficient portion of said body that is adapted to contact the adjacent vertebral bodies when implanted in the spine so as to maintain an angulation of the adjacent vertebral bodies relative to one another, said body having at least two openings in communication with one another for permitting the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant, said body having, an insertion end, a trailing end being larger than said insertion end, and an outer surface including bone engaging means for engaging said implant to the adjacent vertebral bodies, said trailing end being adapted to engage instrumentation for the insertion of said implant, said bone engaging means being adapted to facilitate linear insertion of said implant into the disc space while resisting expulsion of said implant in a direction opposite to the direction of insertion, said implant being made of a material appropriate for human implantation.

267. The spinal fusion implant of claim 266 in which said insertion end is tapered.

268. The spinal fusion implant of claim 266 in which said implant comprises a bone ingrowth material.

79 269. The spinal fusion implant of claim 266 in which said implant comprises a fusion promoting material.

270. The spinal fusion implant of claim 266 in which said implant is at least in part bioabsorbable.

Sub 810 271. The spinal fusion implant of claim 266 in which said body includes a plurality of openings for retaining fusion promoting material.

272. The spinal fusion implant of claim 266 in which said bone engaging means includes said outer surface being porous at least in part.

273. The spinal fusion implant of claim 266 in which said bone engaging means comprises a plurality of posts spaced apart along at least a portion of the outer surface of said body.

274. The spinal fusion implant of claim 273 in which said plurality of posts have a head portion and a stem portion, said head portion having a wider diameter than said stem portion.

Sub 817 275. The spinal fusion implant of claim 266 in which said bone engaging means comprises a mesh-like material having a plurality of interstices for receiving fusion promoting material.

276. The spinal fusion implant of claim 266 in which said bone engaging means includes a plurality of surface roughenings for engaging said adjacent vertebral

bodies and for maintaining said implant in place, said surface roughenings being present on at least a portion of said outer surface of said implant.

277. The spinal fusion implant of claim 276 in which said surface roughenings include a plurality of ratchetings.

278. The spinal fusion implant of claim 276 in which said surface roughenings include knurling.

279. The spinal fusion implant of claim 266 in which said implant has an internal chamber and means for accessing said internal chamber.

280. The spinal fusion implant of claim 279 in which said internal chamber is capable of containing fusion promoting material.

281. The spinal fusion implant of claim 279 in which said body includes a wall surrounding said internal chamber.

282. The spinal fusion implant of claim 281 in which said wall has a plurality of openings passing therethrough in communication with said internal chamber.

283. The spinal fusion implant of claim 279 in which said body has means for closing said accessing means.

284. The spinal fusion implant of claim 266 in which one of said ends includes an engagement means for engaging instrumentation for the insertion of said implant.

285. The spinal fusion implant of claim 266 in which at least a portion of said outer surface comprises wells having at least partial walls.

286. The spinal fusion implant of claim 266 in which said implant is configured to be placed in close proximity in a side by side alignment to a second spinal fusion

implant, said first and second implants when placed together having a combined overall width that is less than the sum of the individual maximum diameters of each of said first and second implants.

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287. The spinal fusion implant of claim 266 in which said body has a longitudinal central axis and at least one truncated side forming a planar surface parallel to said central axis.
288. The spinal fusion implant of claim 266 in which said implant is made of a material that is stronger than bone.
289. The spinal fusion implant of claim 266, in combination with a fusion promoting material.
290. The spinal fusion implant of claim 289, wherein said fusion promoting material includes at least one of bone, bone morphogenic protein, hydroxyapatite, hydroxyapatite compounds, and osteogenic proteins.
- Sub 420
291. A non-threaded interbody spinal fusion implant for insertion across the height of a disc space between adjacent vertebral bodies of a human spine, the implant comprising a body having an insertion end, a trailing end being larger than said insertion end, a length between said ends, and an outer surface bone engaging means for engaging said implant to adjacent vertebral bodies of the spine, said trailing end being adapted to engage instrumentation for the insertion of said implant, said body having at least two openings in communication with one another for permitting the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant, the outer locus of said bone engaging means forming a substantially frusto-conical configuration that is along

~~a portion of said bone engaging means adapted to contact the adjacent vertebral bodies when implanted in the spine and is along at least a portion of the length of said implant nearer said trailing end than said insertion end, said implant being made of a material appropriate for human implantation.~~

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292. The spinal fusion implant of claim 291 in which said body has a substantially frusto-conical configuration along a portion of said outer surface oriented toward said adjacent vertebral bodies.

293. The spinal fusion implant of claim 291 in which said body has a substantially cylindrical configuration along a portion of said outer surface oriented toward said adjacent vertebral bodies.

294. The spinal fusion implant of claim 291 in which said bone engaging means comprises a plurality of posts spaced apart along at least a portion of the outer surface of said body.

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295. The spinal fusion implant of claim 291 in which said bone engaging means comprises a mesh-like material having a plurality of interstices for receiving fusion promoting material.

296. The spinal fusion implant of claim 291 in which said bone engaging means includes a plurality of surface roughenings for engaging said adjacent vertebral bodies and for maintaining said implant in place, said surface roughenings being present on at least a portion of said outer surface of said implant.

297. The spinal fusion implant of claim 291 in which said body includes a longitudinal central axis and at least one truncated side forming a planar surface parallel to said central axis.

298. The spinal fusion implant of claim 291 is which said implant is made of a material that is stronger than bone.

299. The spinal fusion implant of claim 291, in combination with a fusion promoting material.

300. The spinal fusion implant of claim 299, wherein said fusion promoting material includes at least one of bone, bone morphogenic protein, hydroxyapatite, hydroxyapatite compounds, and osteogenic proteins.

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Pub 822 → 301. A non-threaded spinal fusion implant for insertion across the height of a disc space between adjacent vertebral bodies of a human spine, said implant comprising a body having an outer locus larger than the space between two adjacent vertebral bodies to be fused and being formed of a mesh-like material capable of supporting two adjacent vertebral bodies in a spaced apart relationship to each other, said mesh-like material having a plurality of interstices for receiving fusion promoting material and for engaging said implant to said adjacent vertebral bodies of the spine, said body being adapted to permit the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant, said implant being made of a material appropriate for human implantation.

302. The spinal fusion implant of claim 301 including a plurality of openings in the outer locus of said implant.

303. The spinal fusion implant of claim 301 further comprising a plurality of surface roughenings for engaging said adjacent vertebral bodies and for maintaining said

implant in place, said surface roughenings being present on at least a portion of said outer surface of said implant.

79 304. The spinal fusion implant of claim 301 in which said body includes a longitudinal central axis and at least one truncated side forming a planar surface parallel to said central axis.

305. The spinal fusion implant of claim 301 in which said mesh-like material comprises a metal.

306. The spinal fusion implant of claim 301, wherein said body has a hollow interior in communication with at least a portion of said interstices.

307. The spinal fusion implant of claim 301, in combination with a fusion promoting material.

308. The spinal fusion implant of claim 307, wherein said fusion promoting material includes at least one of bone, bone morphogenic protein, hydroxyapatite, hydroxyapatite compounds, and osteogenic proteins.

Pub 23 309. A non-threaded interbody spinal fusion implant for insertion across the height of a disc space between two adjacent vertebral bodies of a human spine, the implant comprising a body having an insertion end, a trailing end, a length between said ends, arcuate portions adapted to contact the adjacent vertebral bodies when implanted in the spine, and a distance between said arcuate portions increasing from said insertion end to said trailing end along a sufficient portion of the length of said implant so as to maintain angulation of the adjacent vertebral bodies relative to one another, said trailing end being adapted to engage instrumentation for the insertion of said implant, said body having at

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least two openings in communication with one another for permitting the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant; and

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bone engaging means for engaging said implant to the adjacent vertebral bodies.

310. The spinal fusion implant of claim 309 in which said bone engaging means includes second arcuate portions oriented toward the adjacent vertebral bodies.

311. The spinal fusion implant of claim 309 in which said bone engaging means comprises a plurality of posts spaced apart along at least a portion of the outer surface of said body.

312. The spinal fusion implant of claim 311 in which said plurality of posts have a head portion and a stem portion, said head portion having a wider diameter than said stem portion.

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313. The spinal fusion implant of claim 311 in which said bone engaging means comprises a mesh-like material having a plurality of interstices for receiving fusion promoting material.

314. The spinal fusion implant of claim 311 in which said bone engaging means includes a plurality of surface roughenings for engaging said adjacent vertebral bodies and for maintaining said implant in place, said surface roughenings being present on at least a portion of said outer surface of said implant.

315. The spinal fusion implant of claim 314 in which said surface roughenings include a plurality of ratchetings.

316. The spinal fusion implant of claim 314 in which said surface roughenings include knurling.

317. The spinal fusion implant of claim 309 in which said implant is made of a material that is stronger than bone.

318. The spinal fusion implant of claim 309, in combination with a fusion promoting material.

319. The spinal fusion implant of claim 318, wherein said fusion promoting material includes at least one of bone, bone morphogenic protein, hydroxyapatite, hydroxyapatite compounds, and osteogenic proteins.

320. A non-threaded interbody spinal fusion implant for insertion across the height of a disc space between two adjacent vertebral bodies of a human spine, the implant comprising:

a body having a insertion end, a trailing end, a length between said ends, and an outer surface including bone engaging means for engaging said implant to the adjacent vertebral bodies, said bone engaging means having arcuate portions adapted to contact the adjacent vertebral bodies when implanted in the spine, and a distance between said arcuate portions increasing from said insertion end to said trailing end along a sufficient portion of the length of said implant so as to maintain an angulation of the adjacent vertebral bodies relative to one another, said trailing end being adapted to engage instrumentation for the insertion of said implant, said body having at least two openings in communication with one another for permitting the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant.

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321. The spinal fusion implant of claim 320 in which said bone engaging means comprises a plurality of posts spaced apart along at least a portion of the outer surface of said body.
322. The spinal fusion implant of claim 321 in which said plurality of posts have a head portion and a stem portion, said head portion having a wider diameter than said stem portion.
- Sub 426 323. The spinal fusion implant of claim 320 in which said bone engaging means comprises a mesh-like material having a plurality of interstices for receiving fusion promoting material.
324. The spinal fusion implant of claim 320 in which said bone engaging means includes a plurality of surface roughenings for engaging said adjacent vertebral bodies and for maintaining said implant in place, said surface roughenings being present on at least a portion of said outer surface of said implant.
325. The spinal fusion implant of claim 324 in which said surface roughenings include a plurality of ratchetings.
326. The spinal fusion implant of claim 324 in which said surface roughenings include knurling.
327. The spinal fusion implant of claim 320 in which said implant is made of a material that is stronger than bone.
328. The spinal fusion implant of claim 320, in combination with a fusion promoting material.

329. The spinal fusion implant of claim 328, wherein said fusion promoting material includes at least one of bone, bone morphogenic protein, hydroxyapatite, hydroxyapatite compounds, and osteogenic proteins.

330. A non-threaded spinal fusion implant for insertion across the height of a disc space between adjacent vertebral bodies of a human spine, said implant comprising a body having an outer locus larger than the space between two adjacent vertebral bodies to be fused and being formed of a cancellous material capable of supporting two adjacent vertebral bodies in a spaced apart relationship to each other, said cancellous material having a plurality of interstices for holding fusion promoting material and for permitting the growth of bone from adjacent vertebral body to adjacent vertebral body through said cancellous material, said implant being made of a material appropriate for human implantation.

331. The spinal fusion implant of claim 330 including a plurality of openings in the exterior surface of said implant.

332. The spinal fusion implant of claim 330 further comprising a plurality of surface roughenings for engaging said adjacent vertebral bodies and for maintaining said implant in place, said surface roughenings being present on at least a portion of said outer surface of said implant.

333. The spinal fusion implant of claim 330 in which said body includes a longitudinal central axis and at least one truncated side forming a planar surface parallel to said central axis.